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19. ABSTRACT (Continue on reverse if necessary and identity by block number)  In a communication system one of the primary concerns is maximum efficiency in signal transmission and reception. For maximum power transfer there must be an impedance match between the antenna and transmitter (or receiver). A basic problem is to design a coupling network between a given source and a given load so that the transfer of power from the source to the load is maximized over a given frequency band of interest. The device used to perform this impedance matching is called an antenna matching network.								
The number of pieces of equipment requiring an antenna connection in some applications may exceed the number of acceptable locations available for antennas. One solution is the use of broadband antennas that have a low VSWR (voltage standing-wave radio) over the operating band. Broadband antennas are used in conjunction with multicouplers (filters with multiple inputs) to provide a sufficient number of antenna connections.								
Despite the aid of Smith Charts, the traditional design of an antenna matching network by engineering experience and manual calculation means is an extremely time-consuming task. This paper is intended to relieve the engineer of the tedious numerical calculation involved in the network design.								
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## THE DESIGN OF ANTENNA MATCHING NETWORKS USING A MICROCOMPUTER

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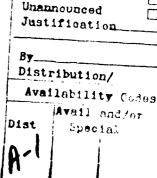
S. T. Li and D. W. S. Tam Naval Ocean Systems Center, Code 822 271 Catalina Blvd. San Diego, California 92152-5000

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